

***Raphidiophrys viridis* Archer, 1867**

**Most likely ID:** n.a.

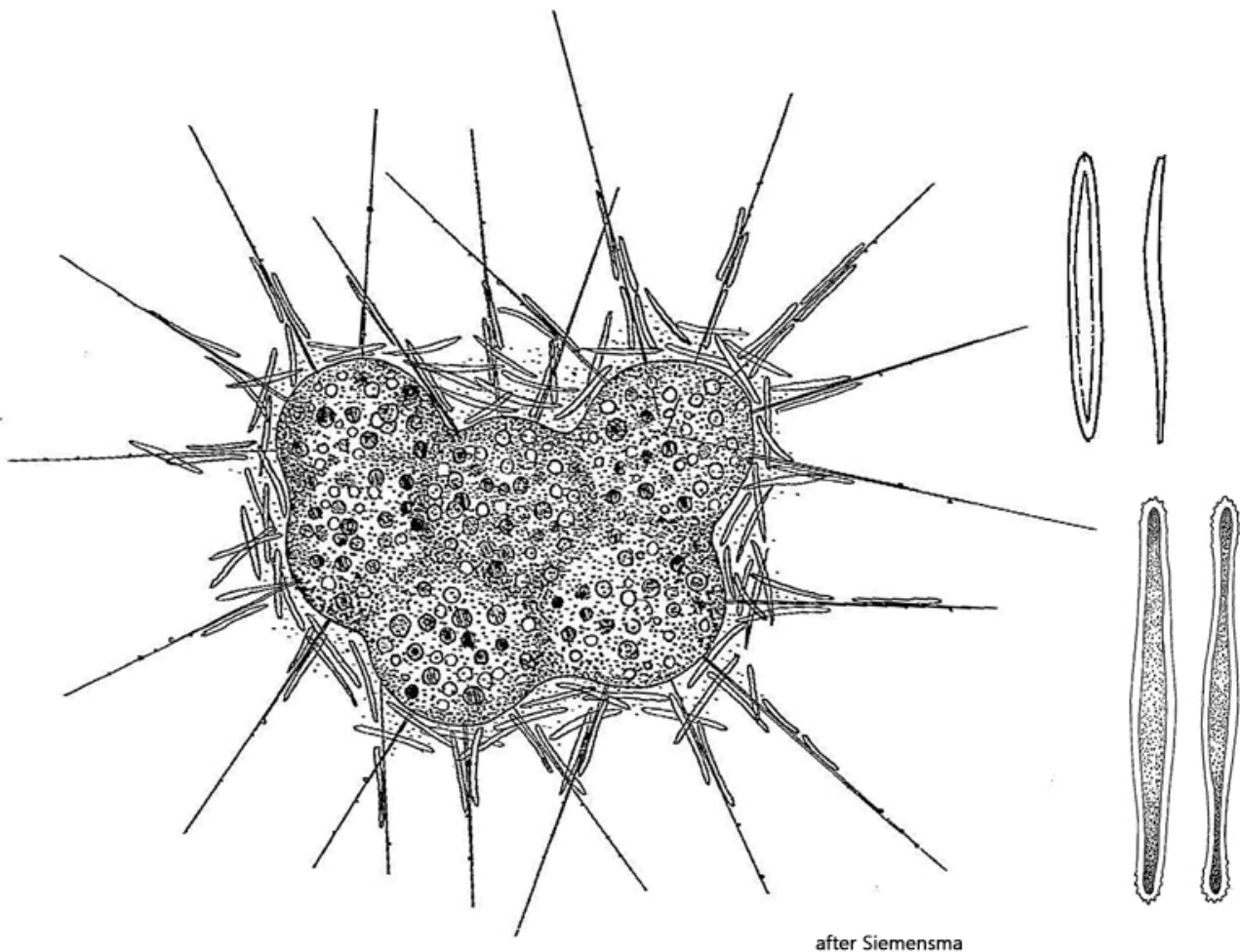
**Synonym:** n.a.

**Sampling location:** [Simmelried](#)

**Phylogenetic tree:** [Raphidiophrys viridis](#)

**Diagnosis:**

- cells about 50 µm in diameter (without sheath of scales)
- colonies of 5–18 specimen, tightly packed
- diameter of colonies about 200 µm
- scales rod-like, with slightly tapered ends
- scales 15–37 µm long, width about 3 µm
- poles of scales with small papillae (hard to see)
- cytoplasm green due to symbiotic algae
- globular nucleus with central nucleolus
- diameter symbiotic algae 5–6.5 µm
- numerous axopodia, about length of colony



after Siemensma

### Raphidiophrys viridis

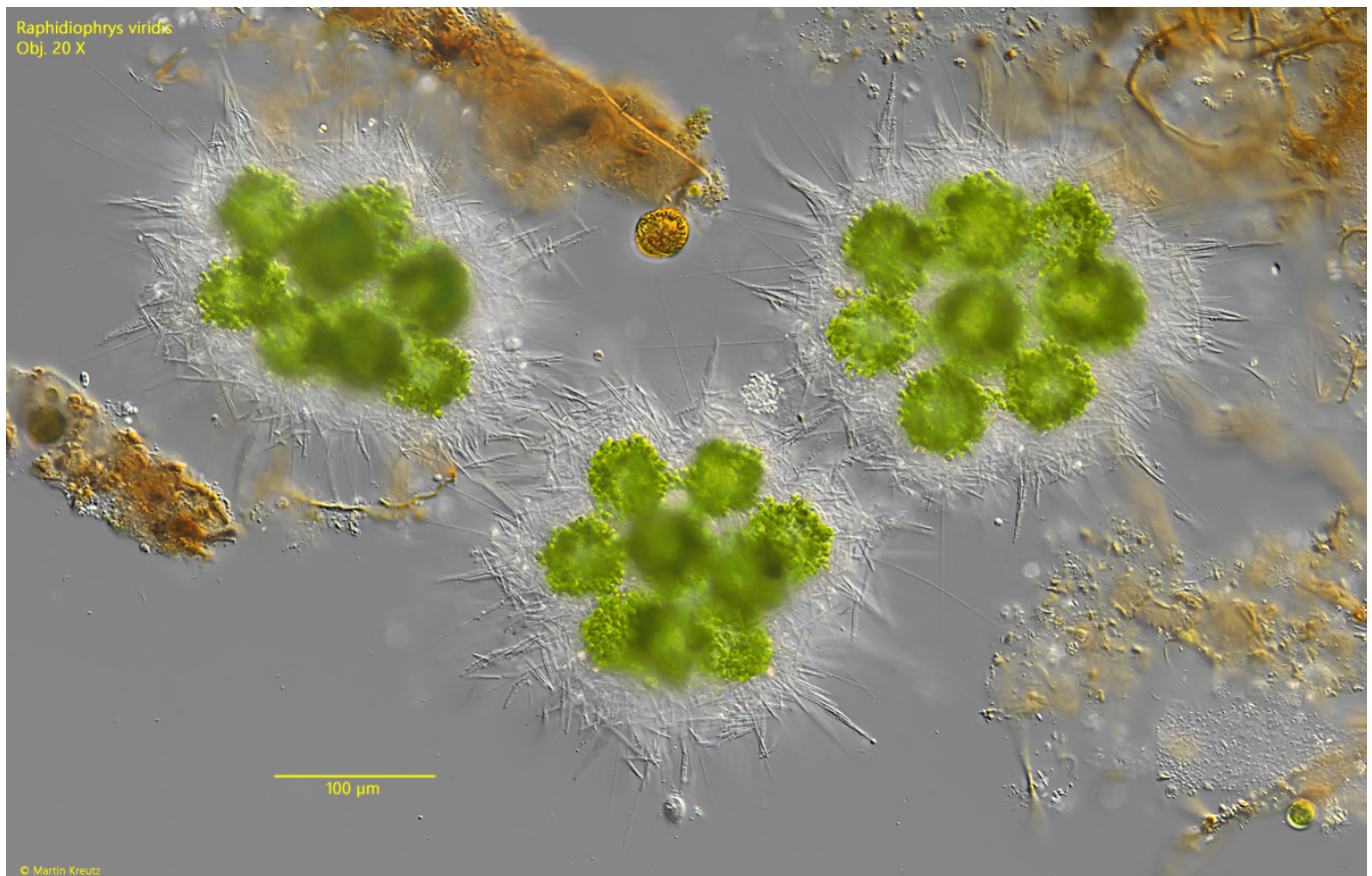
I find *Raphidiophrys viridis* among the floating plants in the [Simmelried](#). However, the species occurs only sporadically. I have records from May 2005 and then again 20 years later in June-July 2025. I found the colonies particularly frequently in old samples and on the walls and bottom of the vessels.

The colonies of *Raphidiophrys viridis* are very conspicuous in the samples, with a diameter of about 200  $\mu\text{m}$  and green-colored cells (s. figs. 1, 2 and 3). The cells lie close together in the colonies and do not form long, slender plasma bridges like [Raphidiophrys elegans](#). However, the essential distinguishing feature are the scales covering the colonies, which in *Raphidiophrys viridis* are elongated rods with tapered ends. They resemble the shape of a boat (s. figs. 9 and 10). In my population, the scales were 25–35  $\mu\text{m}$  long. They are said to have fine striations and small papillae at the poles, but I was unable to detect these.

According to my observations, the nucleus has a large, central nucleolus (s. fig. 6). The numerous symbiotic algae in the cytoplasm have a slightly irregular shape and

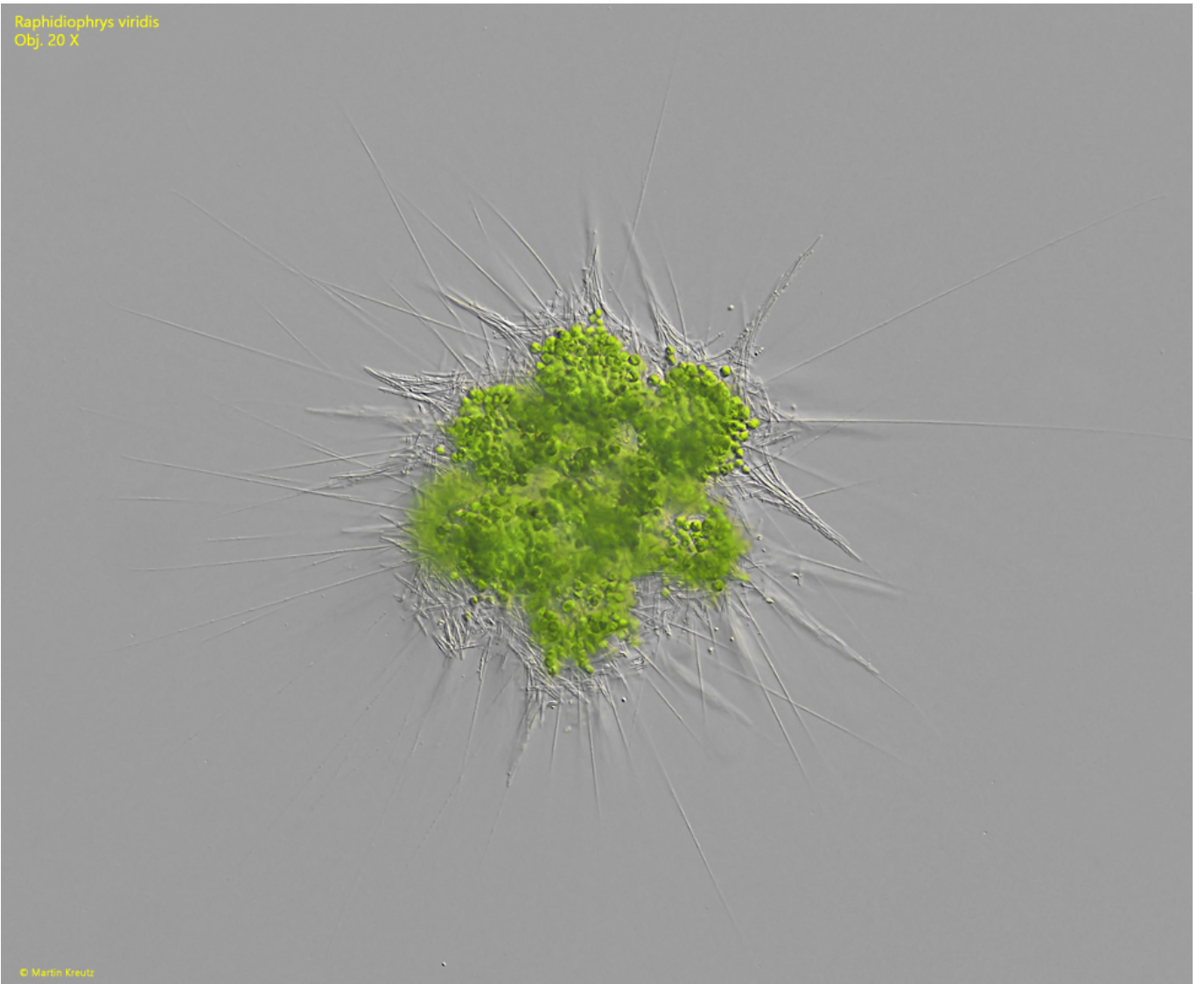
a diameter of 5.0–6.5  $\mu\text{m}$ . They have a pyrenoid and their own cell nucleus (s. figs. 7 and 8). In addition, the cytoplasm always contained some highly refractive granules. They do not appear to belong to the genus *Chlorella*. The symbiotic algae of *Raphidiophrys viridis* resemble those of [\*Raphidiophrys elegans\*](#).

More images and information on *Raphidiophrys viridis*: [Ferry Siemensma-Microworld-Raphidiophrys viridis](#)

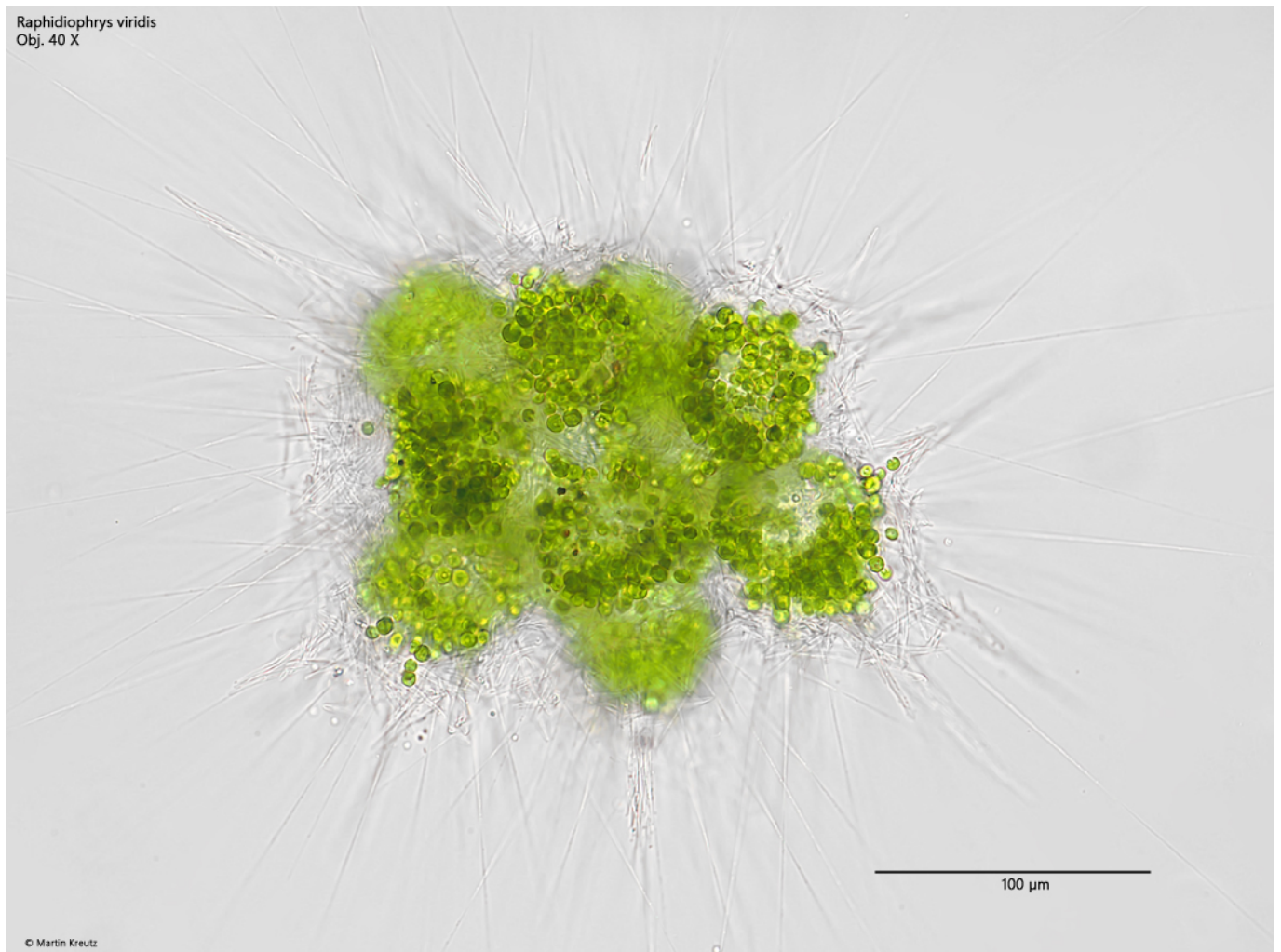


**Fig. 1:** *Raphidiophrys viridis*. D = 230–240  $\mu\text{m}$  (of colonies). The colonies between detritus particles. Obj. 20 X.

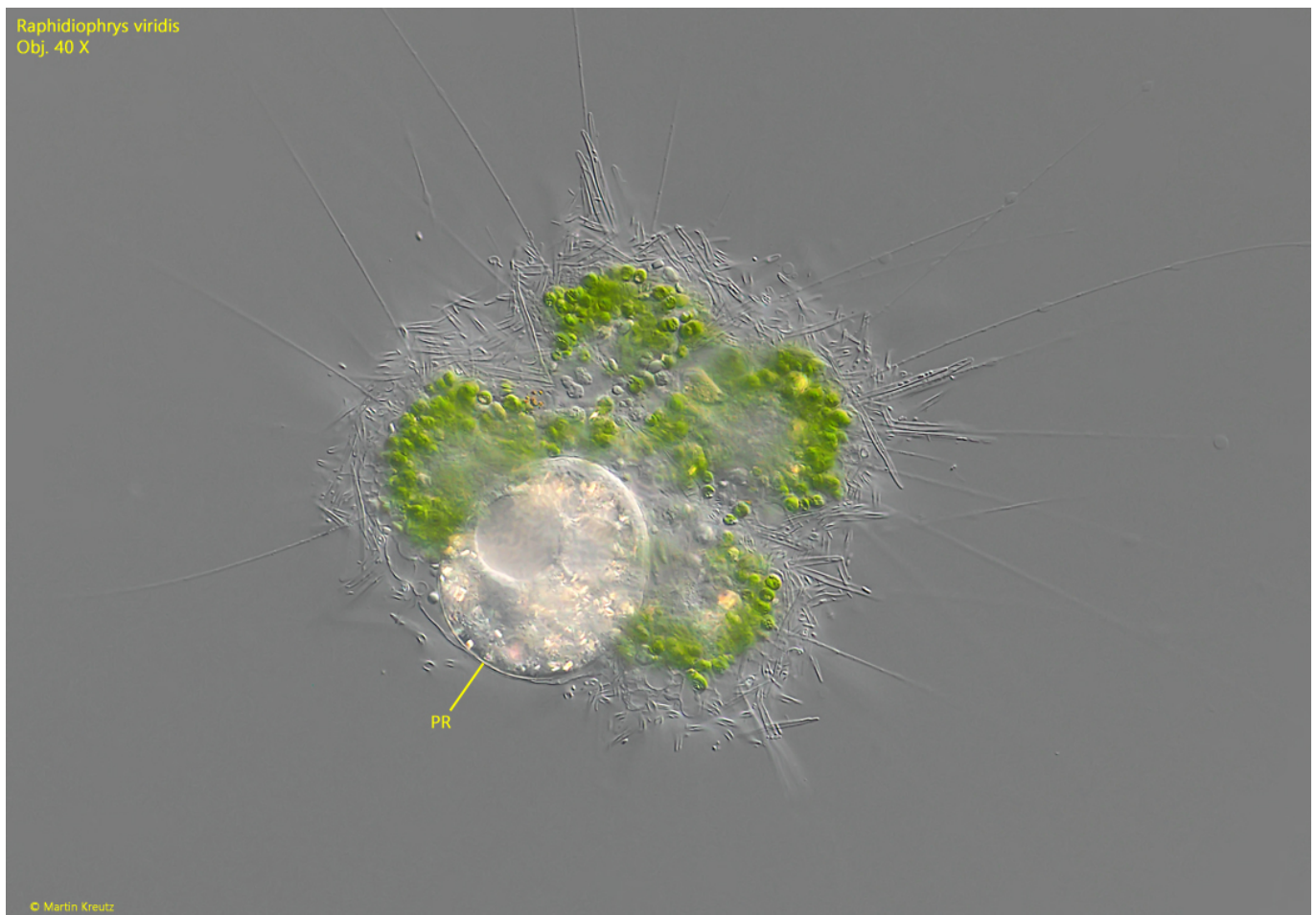
Raphidiophrys viridis  
Obj. 20 X



**Fig. 2:** *Raphidiophrys viridis*.  $D = 290\ \mu\text{m}$  (of colony). A colony with fully extended axopodia. Obj. 20 X.



**Fig. 3:** *Raphidiophrys viridis*. D = 260 µm (of colony). A colony in brightfield illumination. Obj. 40 X.



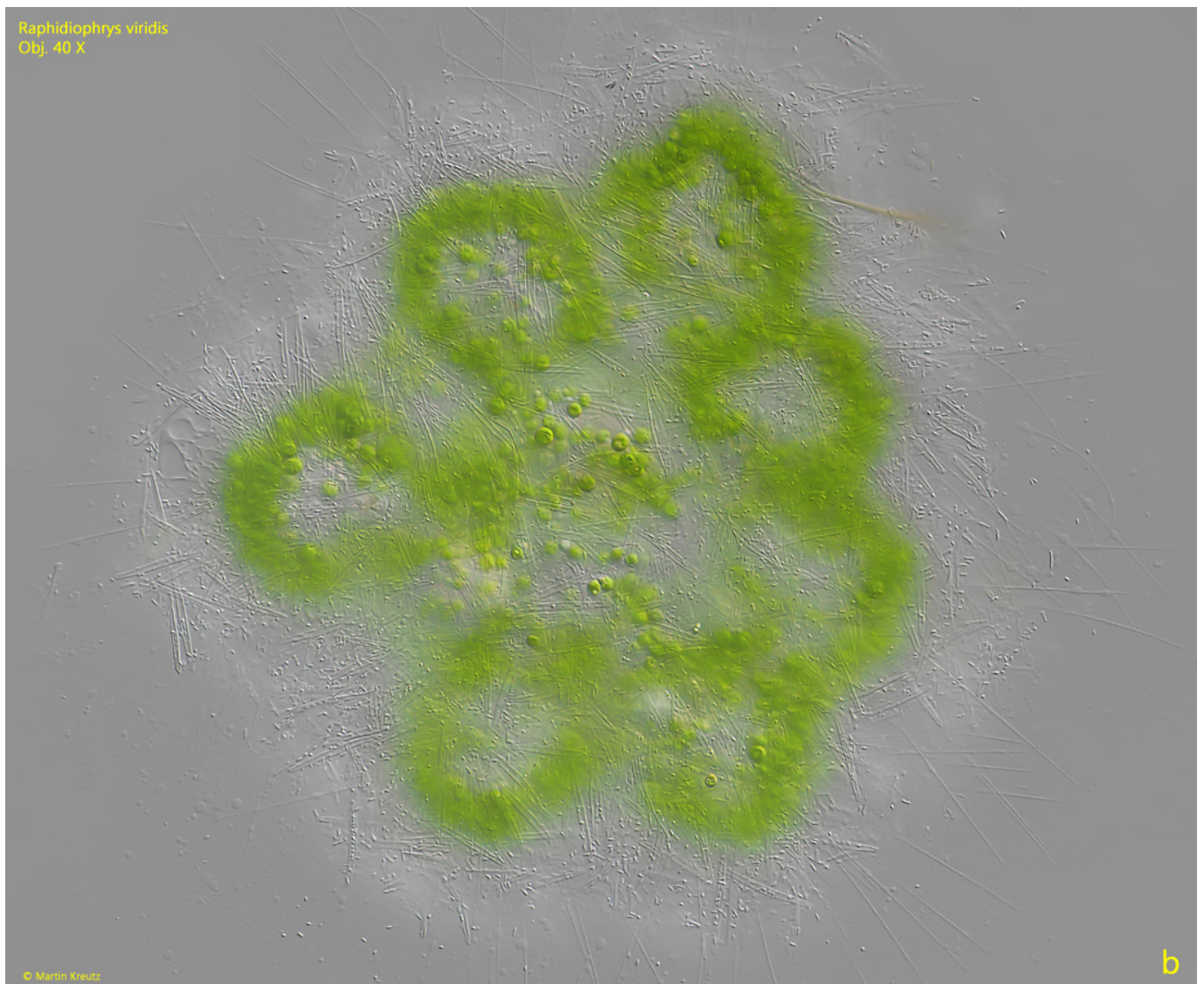
**Fig. 4:** *Raphidiophrys viridis*. A colony with caught prey (PR). The prey is a ciliate. Obj. 40 X.

Raphidiophrys viridis  
Ob. 40 X

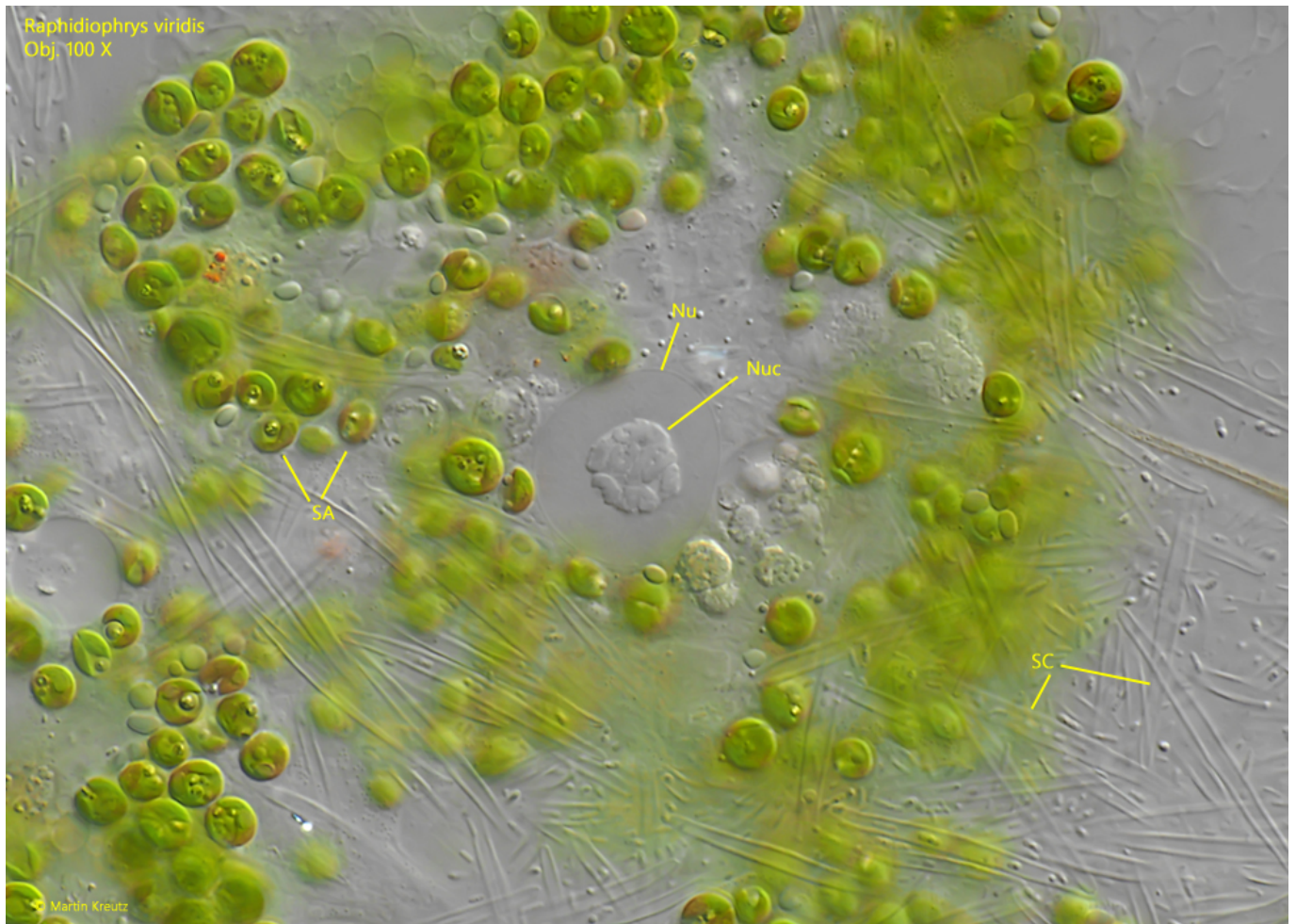


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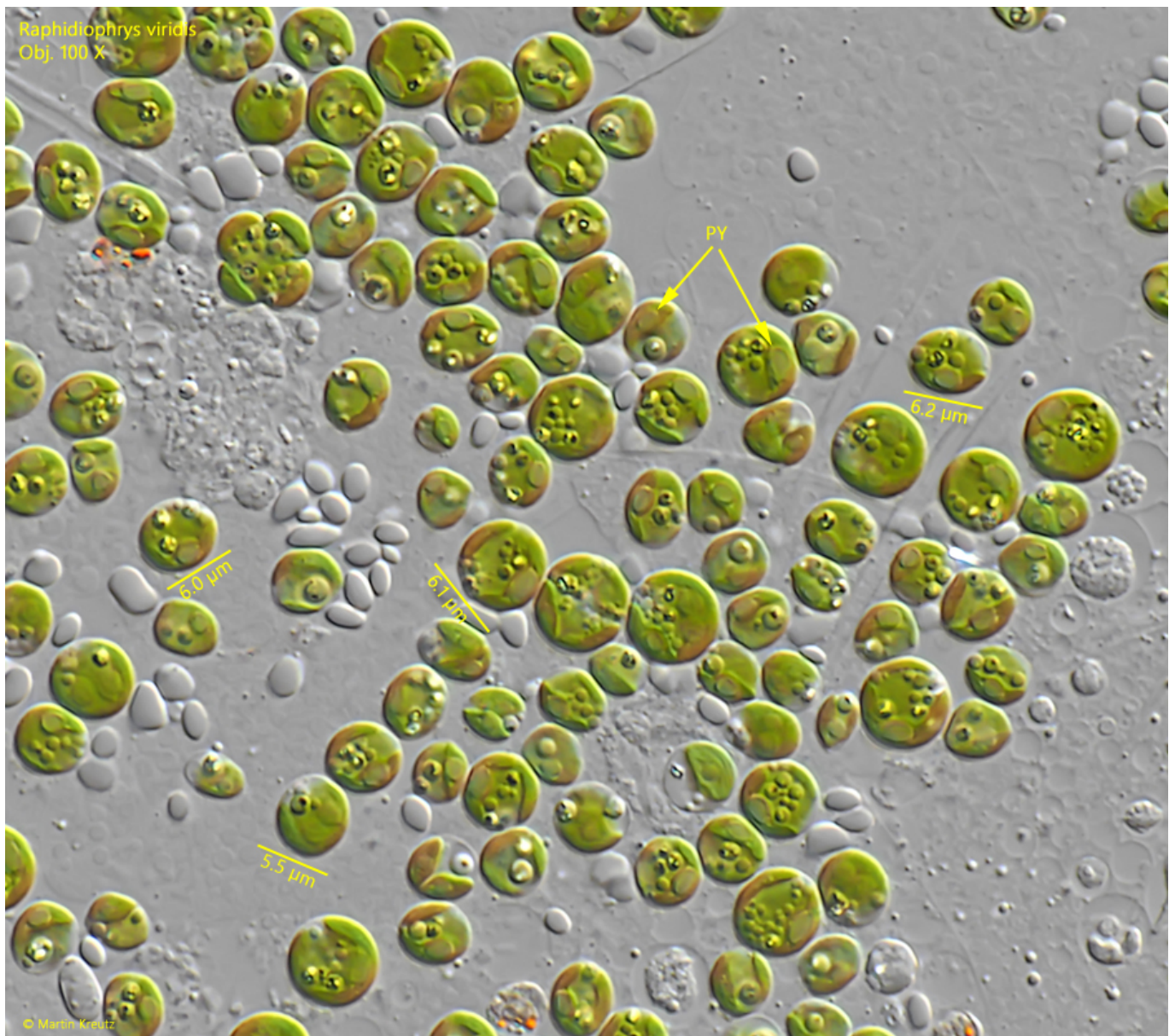
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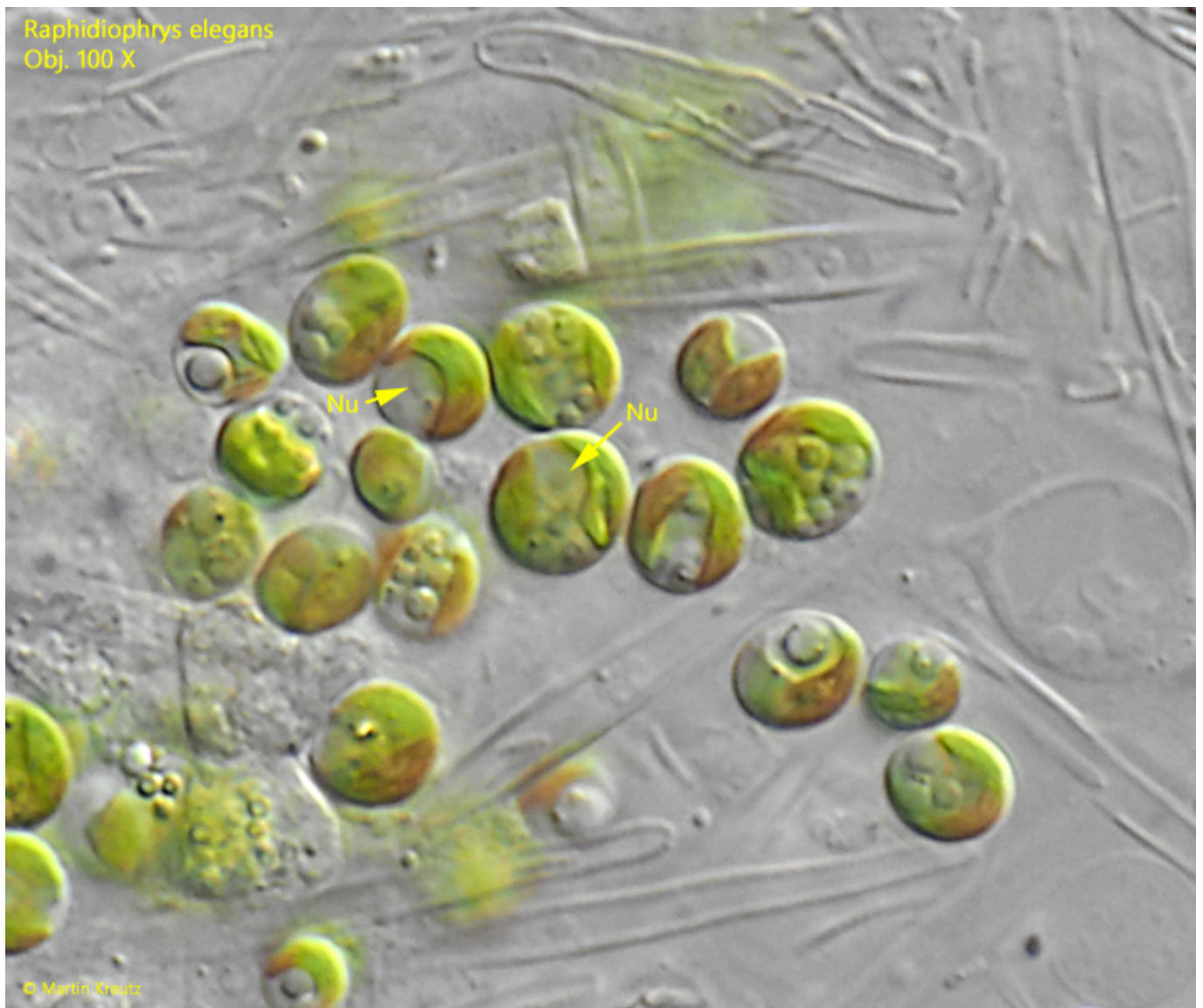
**Fig. 5 a-b:** *Raphidiophrys viridis*. Two focal planes of a slightly squashed colony. Obj. 40 X..



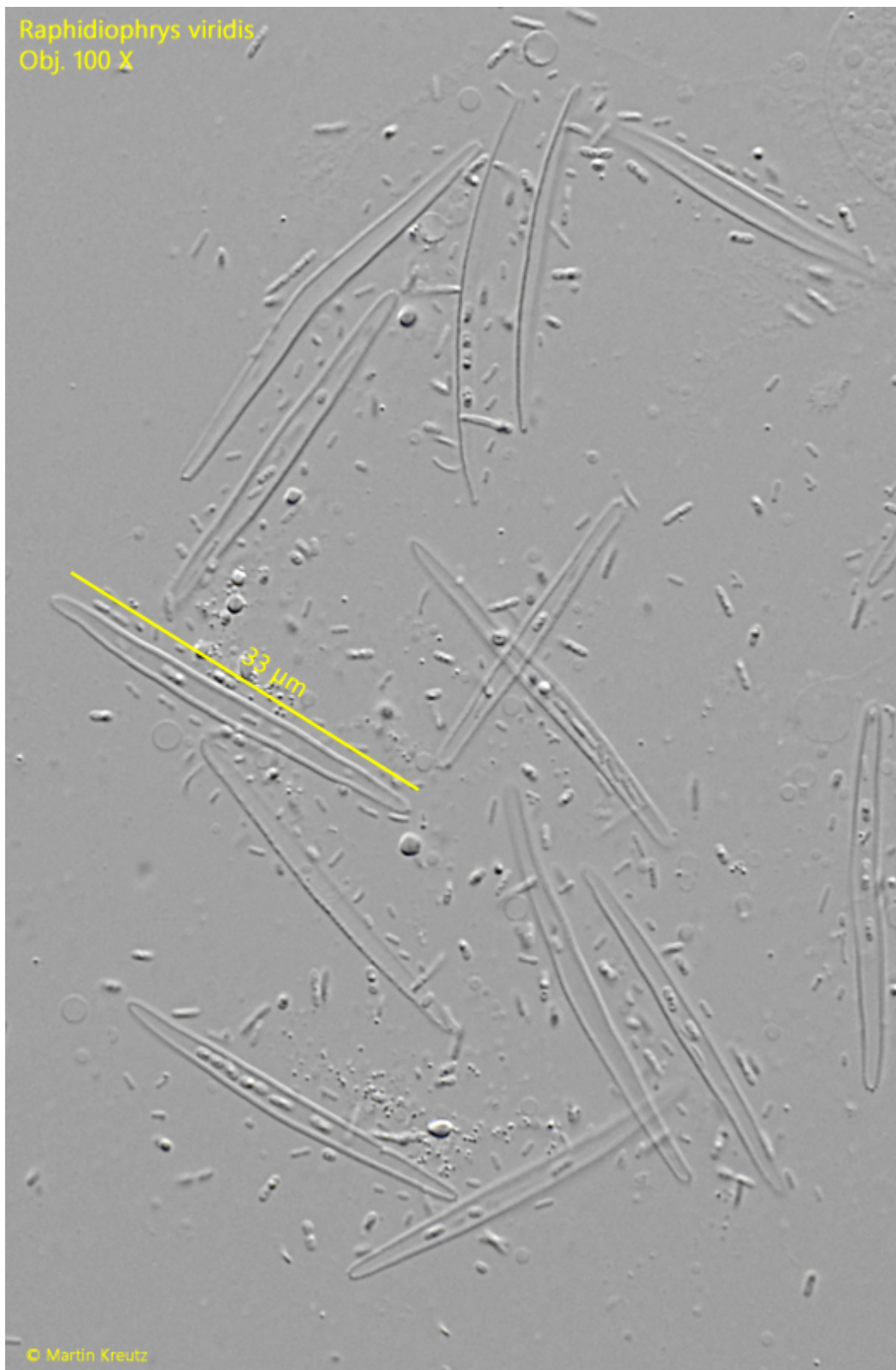
**Fig. 6:** *Raphidiophrys viridis*. The nucleus (Nu) with the central nucleolus (Nuc) in a squashed specimen. SA = symbiotic algae, SC = scales. Obj. 100 X.



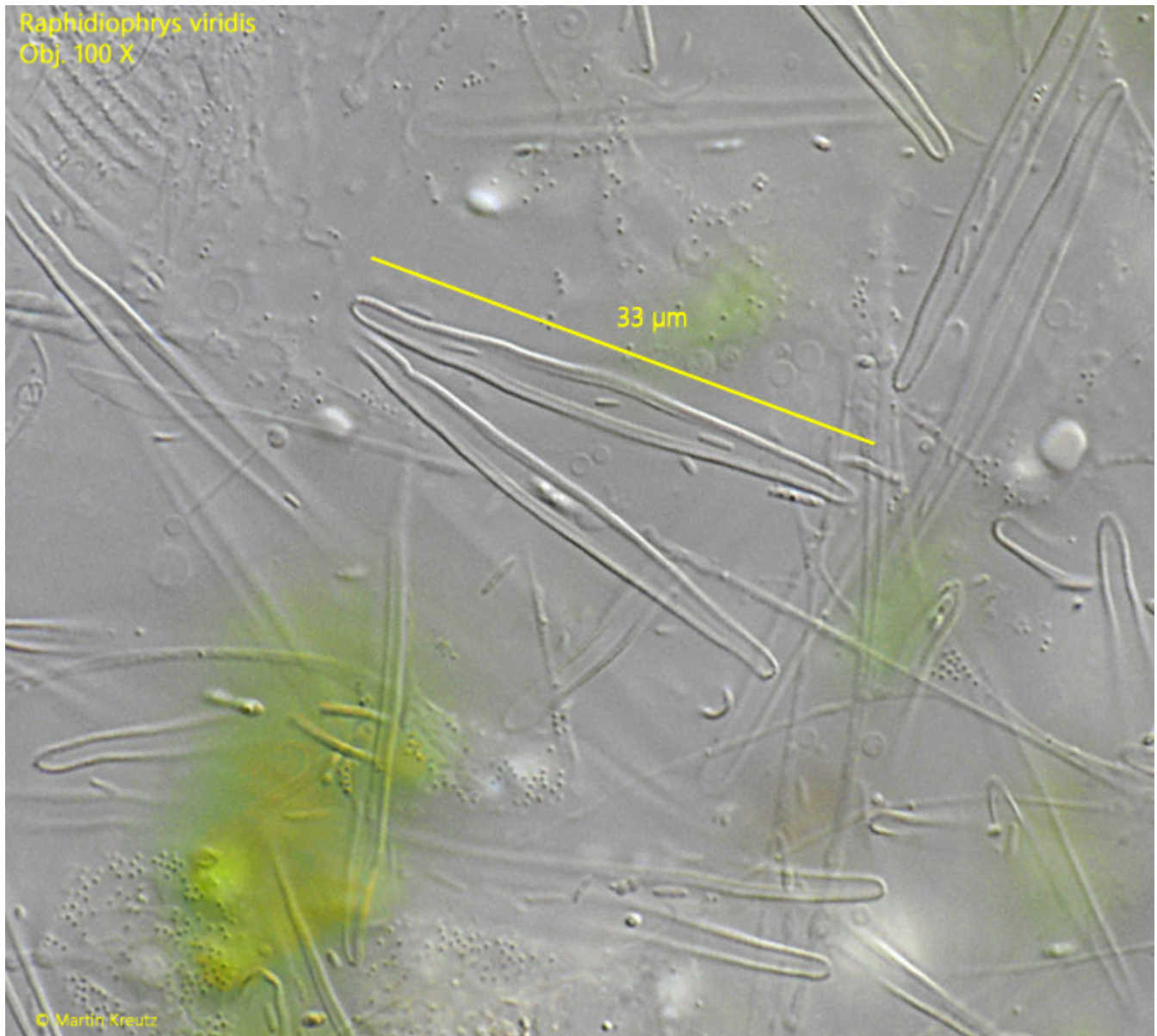
**Fig. 7:** *Raphidiophrys viridis*. The symbiotic algae in a strongly squashed specimen. The symbiotic algae have a slightly irregular shape and a diameter of 5.0–6.5 µm. A pyrenoid (PY) is present. The algae are not of the *Chlorella* type. Obj. 100 X.



**Fig. 8:** *Raphidiophrys viridis*. The symbiotic algae of a second specimen with the visible nucleus (Nu). Obj. 100 X.



**Fig. 9:** *Raphidiophrys viridis*. The rod-shapes scales with tapered ends of a strongly squashed specimen. The scales are 29–34 µm long. Obj. 100 X.



**Fig. 10:** *Raphidiophrys viridis*. The scales of a second, strongly squashed specimen. Obj. 100 X.